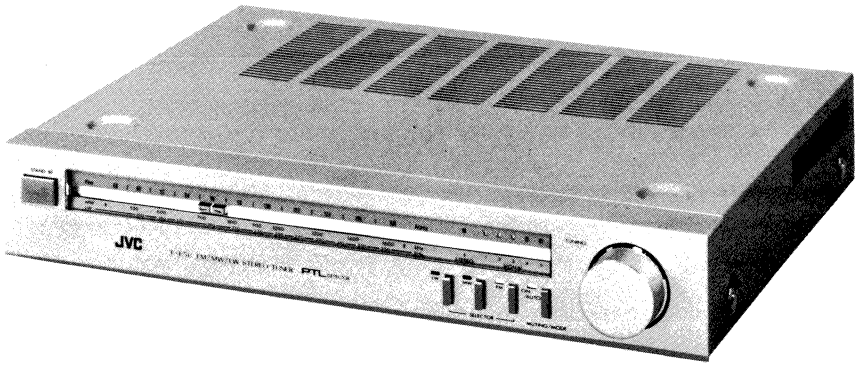
JVC

SERVICE MANUAL

MODEL T-E5L

FM/MW/LW STEREO TUNER



No. 2539
SEP 1980

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Warning When replacing the parts marked wtih ⚠, be sure to use the designated parts to ensure safety.

1. Specifications

FM Section (Based upon IHF Standard)

Tuning Range	: 87.5 MHz – 108 MHz
Usable Sensitivity	: 0.9 μV/75 Ω (10.3 dBf)
50 dB S/N Sensitivity	: 1.8 μV/75 Ω (16.3 dBf) (Mono) 22.5 μV/75 Ω (38.3 dBf) (Stereo)
Signal to Noise Ratio	: 85 dB (78 dB, DIN) (Mono) 80 dB (75 dB, DIN) (Stereo)
Distortion at 100 Hz	: 0.10 % (Mono) 0.15 % (Stereo)
at 1 kHz	: 0.10 % (Mono) 0.15 % (Stereo)
at 6 kHz	: 0.10 % (Mono) 0.15 % (Stereo)
Intermodulation Distortion	: 0.08 % (Mono) 0.10 % (Stereo)
Capture Ratio	: 1.0 dB
Alternated Channel Selectivity	: 65 dB, ±400 kHz (35 dB, ±300 kHz DIN)
Image Rejection	: 60 dB
IF Rejection	: 90 dB
Spurious Rejection	: 90 dB
RF Intermodulation Rejection	: 70 dB
AM Suppression	: 60 dB
Stereo Separation at 1 kHz	: 50 dB
Subcarrier Rejection	: 55 dB
Stereo Threshold	: 4.4 μV/75 Ω (24.1 dBf)
Muting Threshold	: 4.4 μV/75 Ω (24.1 dBf)
Frequency Response	: 30 Hz – 12 kHz +0.3 dB, -2.0 dB
De-emphasis	: 50 μsec.
Output Level	: Over 500 mV, ±40 kHz Deviation (DIN 45301)
Antenna Input Impedance	: 75 Ω unbalanced 300 Ω balanced

MW Section

Tuning Range	: 522 kHz – 1611 kHz
Usable Sensitivity	: 300 μV/m (Bar antenna) 50 μV (Ext. antenna)
Total Harmonic Distortion	: 0.5 %
Signal to Noise Ratio	: 50 dB
Selectivity	: 40 dB ±9 kHz
Image Rejection	: 45 dB
IF Rejection Ratio	: 35 dB
Spurious Rejection	: 45 dB
Output Level	: 300 mV/1.6 kΩ

LW Section

Tuning Range	: 150 kHz – 350 kHz
Usable Sensitivity	: 500 μV/m (bar antenna)
Total Harmonic Distortion	: 0.5 %
Signal to Noise Ratio	: 50 dB
Selectivity	: 40 dB ±9 kHz
Image Rejection	: 45 dB
IF Rejection Ratio	: 35 dB
Sprious Rejection	: 45 dB

Dimensions (H x W x D)	: 59 x 340 x 327 mm 2-5/16 x 13-6/16 x 12-14/16 inches
Weight	: 2.7 kg (6.0 lbs.)

Power Specifications

Designated Areas	Line Voltage & Frequency	Power Consumption
CONTINENTAL EUROPE	AC 220 V∿, 50 Hz	12 W
UNITED KINGDOM	AC 240 V∿, 50 Hz	12 W

2. New Technology of Fine Search Indicator

Here is used the Fine Search Indicator for the first time. This new type indicator is provided with the tuning indication LEDs on its tuning dial pointer which show the tuning state by flickering or lighting on FM reception.

1. Operation (See Fig. 2.)

This is a brief explanation of up-search process, that is when the indicator is moved from low to high frequency in search of the desired station RF, by turning the TUNING knob. (In down-search, the lighting of the LEDs is reversed in respect to right and left.)
First of all, when the indicator is positioned where no station RF is present, only the green LED lights, as shown in ①. When the indicator is moved to a higher frequency from this state and reaches a position where a broadcasting program can be received, the left red LED begins to flicker as shown in ②, indicating that only the fringe of the station has been caught. Therefore, when the indicator is moved slowly further in the same direction, both the right and left red LEDs light as shown in ③. One or two sec later, when the servo lock operates, these two LEDs stop flickering as shown in ④ and change to continuous lighting.
In addition, when the indicator is moved to a higher frequency from the state in ③ before operation of the servo lock, the right red LED flickers as shown in ⑤, thereby indicating that the indicator should be adjusted to a little lower frequency. At this time, when the indicator is shifted to a higher frequency, only the green LED lights as shown in ⑥. This means that no station RF is present.
Further, when the indicator is moved from the state in ④ so that the servo lock is in operation, not the state in ⑤ but the state in ⑥ is suddenly reached, because the locking range of the servo lock is wide. (Namely, this locking range is wider than those in ② – ⑤.)

2. Principle (See Fig. 3.)

The drive circuit of the fine search indicator is shown in Fig. 3.
Astable multivibrators X114 and X115 produce the flickering pulses for LEDs by which X117 is turned ON and OFF to make and break the power supply to LEDs. X116, when the servo lock operates, functions to stop the oscillation of X114 and X115 to cease LED flickering. When the servo lock operates, an "H" signal is applied to point A, thus turning ON X116, thereby causing X114 and X115 to stop oscillation.
X118 is used to extinguish the red LEDs when the indicator is positioned outside of the muted band. At this time, an "H" signal is applied to point B, thus turning ON X118. Thereby, the base of X117 becomes "L" to turn OFF X117.
X109 and X110 receive a detuning detection signal to go ON/OFF.

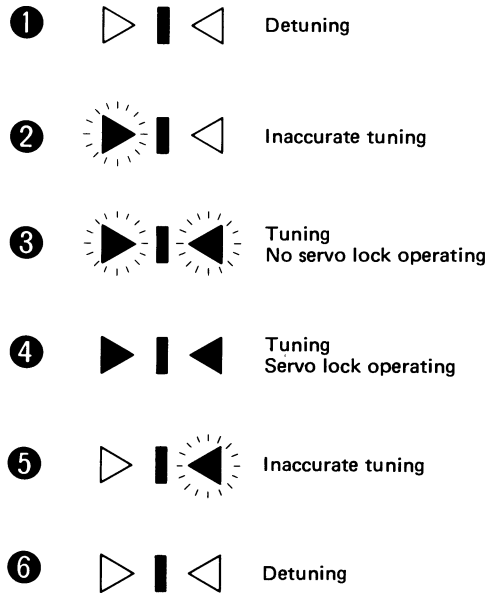

Fig. 2

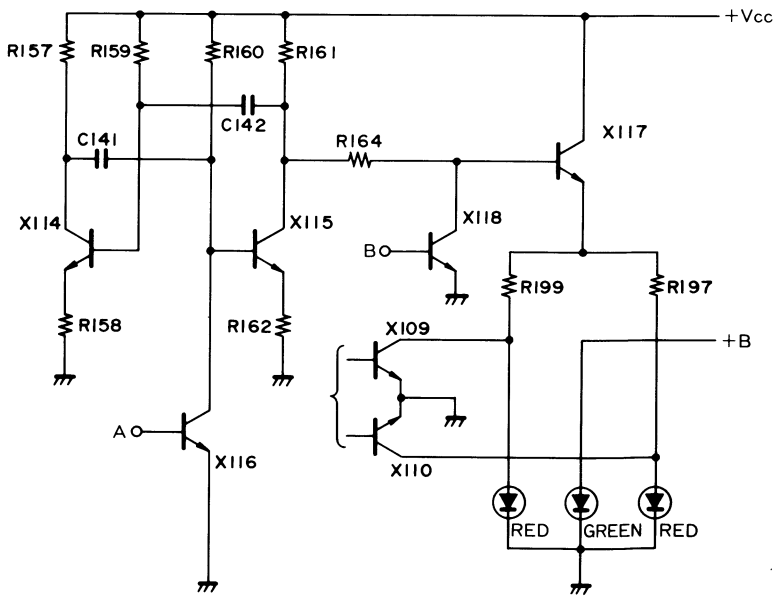

Fig. 3

3. Main Parts Location

3-(1) Top View

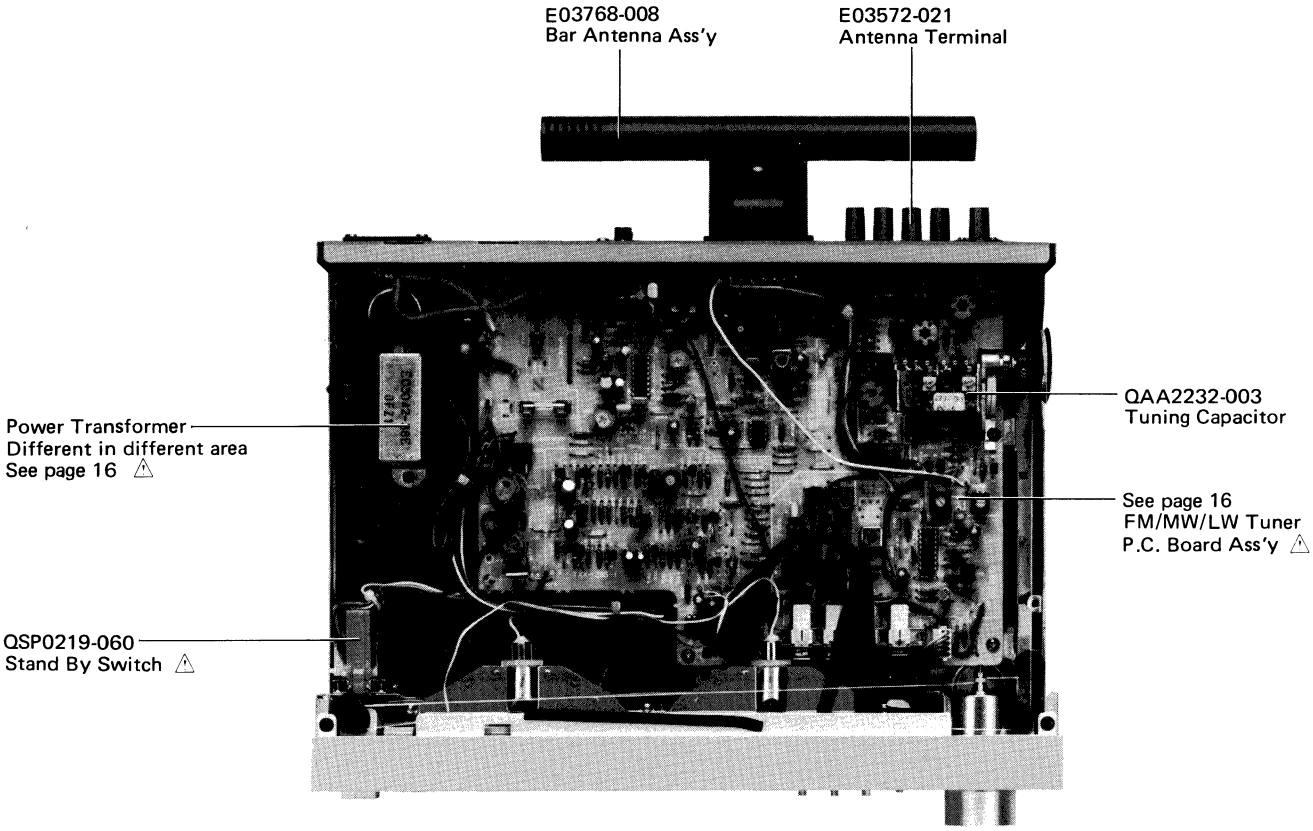

Fig. 4

3-(2) Front View

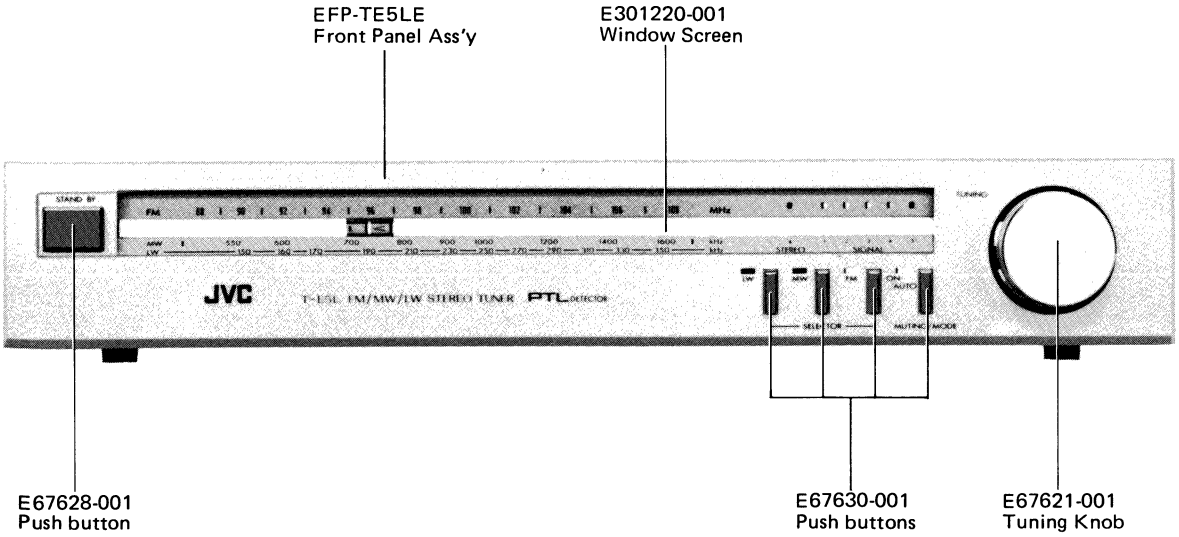

Fig. 5

3-(3) Rear View

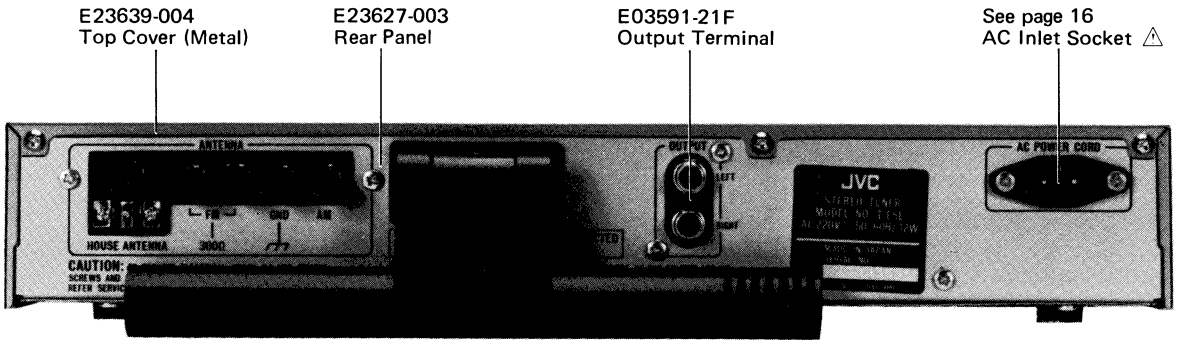

Fig. 6

4. Dial Stringing Procedure

Rotate the tuning drum fully counterclockwise (maximum capacity) at first.

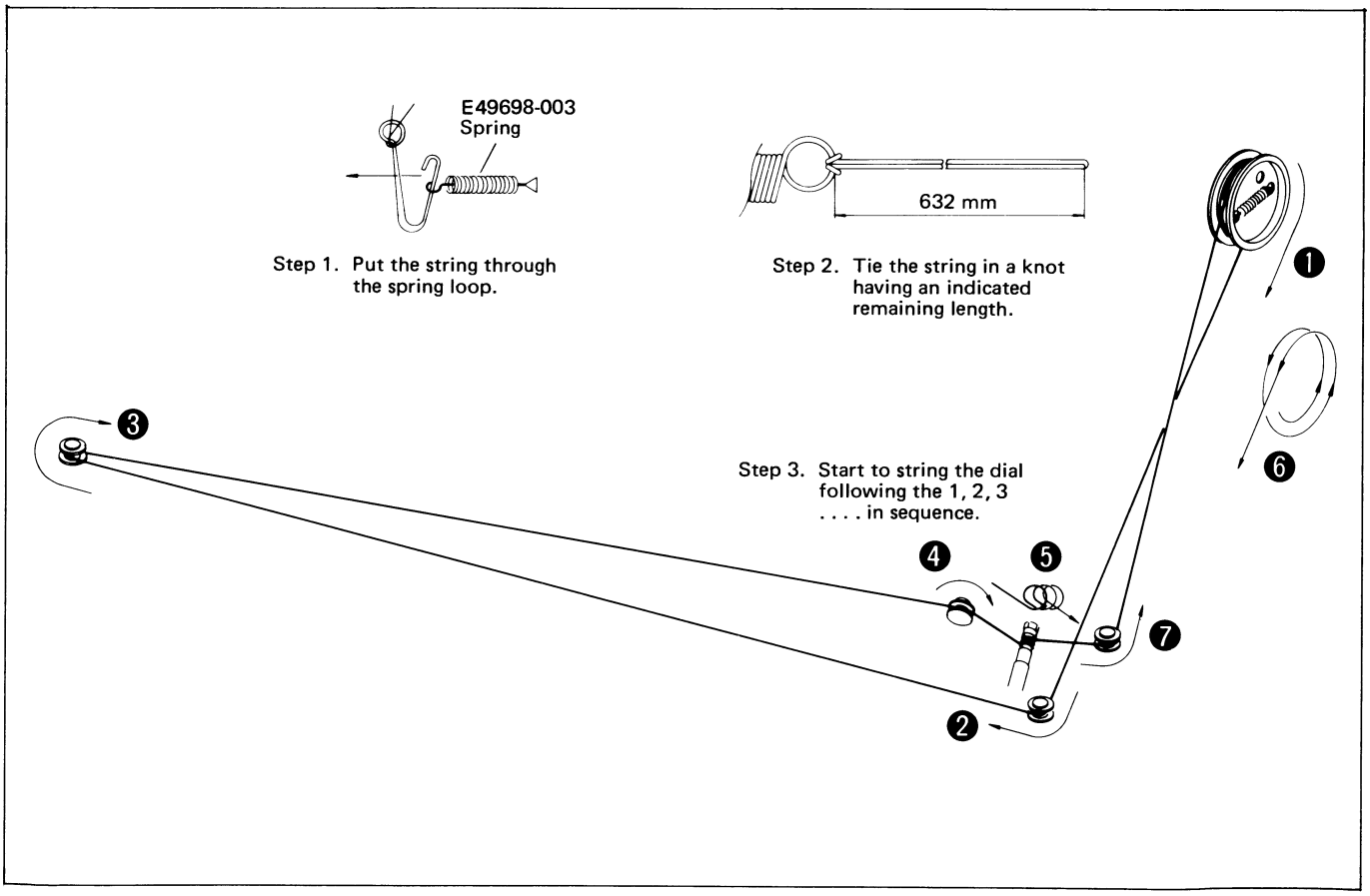

Fig. 7

5. Block Diagram

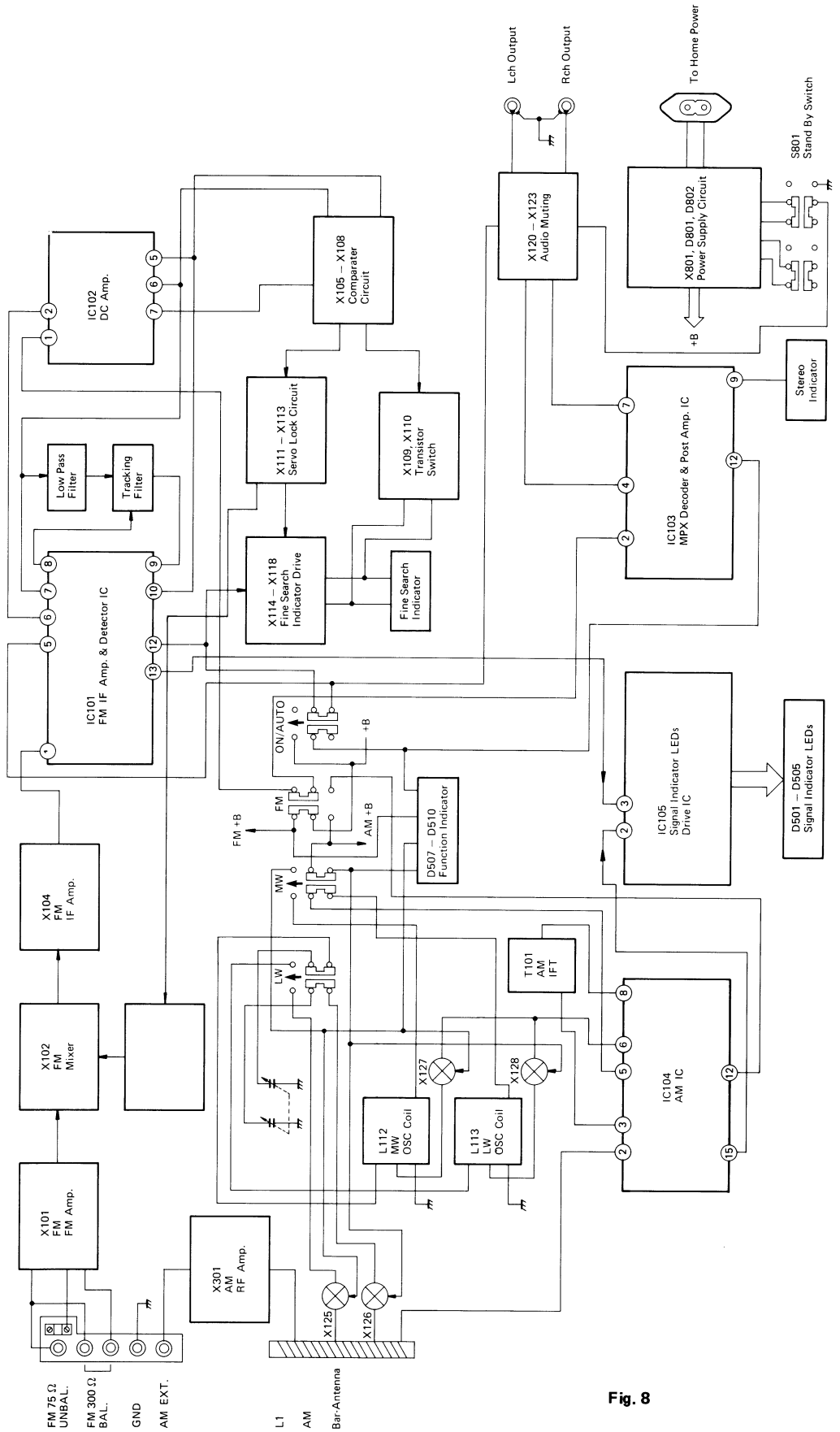

Fig. 8

6. FM/MW/LW Tuner Alignment Procedures

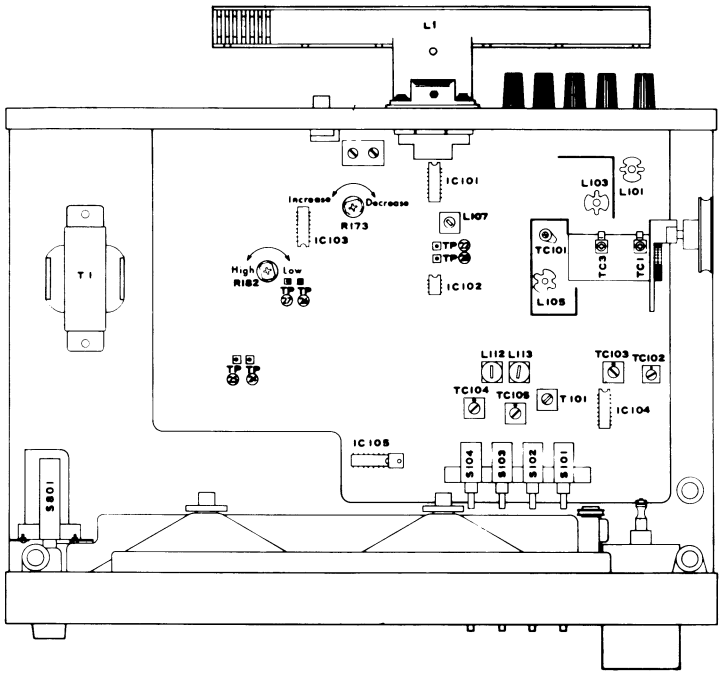

Fig. 9

FM Connection

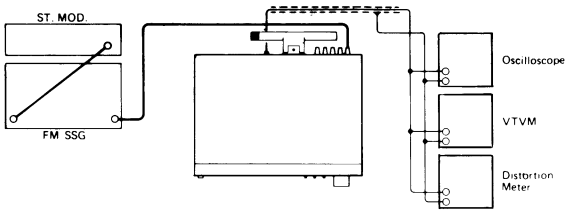

Fig. 10

MW/LW Connection

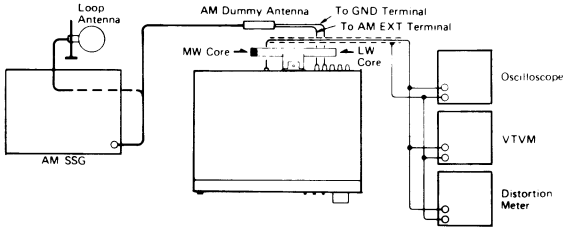

Fig. 11

6-(1) Frontend Section

L105 FM oscillator tuning coil:
Adjust the coil so that a 88 MHz signal can be received when the dial pointer indicates 88 MHz.

TC101 FM oscillator tuning trimmer:
When the dial pointer indicates 108 MHz, adjust the tuning trimmer so that the set receives a 108 MHz signal.

L101 FM Antenna tuning coil: } Maximize the sensitivity
L103 FM RF tuning coil: } at 90 MHz.

TC1 FM Antenna tuning trimmer: } Maximize the sensitivity at 106 MHz.
TC3 FM RF tuning trimmer: }

6-(2) FM Section

L107 FM detector coil:
Connect the center meter to TP22 and 23 and adjust L107 for the center meter reading of "0" (zero).

R182 MPX VCO free-run frequency adjusting resistor:
Adjust it so that the free-run frequency becomes 76 kHz between TP26 and 27.

R173 Stereo separation adjusting resistor:
Adjust it so that the channel separation becomes maximum.

6-(3) MW Section

L112 MW oscillator tuning coil:
Adjust it to receive a 600 kHz signal when the dial pointer indicates 600 kHz.

TC104 MW oscillator tuning trimmer:
Adjust it to receive a 1400 kHz signal when the dial pointer indicates 1400 kHz.

L1 MW-LW bar antenna coil:
Maximize the sensitivity at 600 kHz. (See Fig. 11)

TC103 MW antenna tuning trimmer:
Maximize the sensitivity at 1400 kHz.

T101 No adjustment is required since it is preadjusted at the factory. (MW-LW IF transformer)

6-(4) LW Section

L113 LW oscillator tuning coil:
Adjust it to receive a 160 kHz signal when the dial pointer indicates 160 kHz.

TC105 LW oscillator tuning trimmer:
Adjust it to receive a 350 kHz signal when the dial pointer indicates 350 kHz.

L1 MW-LW bar antenna coil:
Maximize the sensitivity at 160 kHz. (See Fig. 11)

TC102 LW antenna tuning trimmer:
Maximize the sensitivity at 350 kHz.

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7. Exploded View and Part Numbers

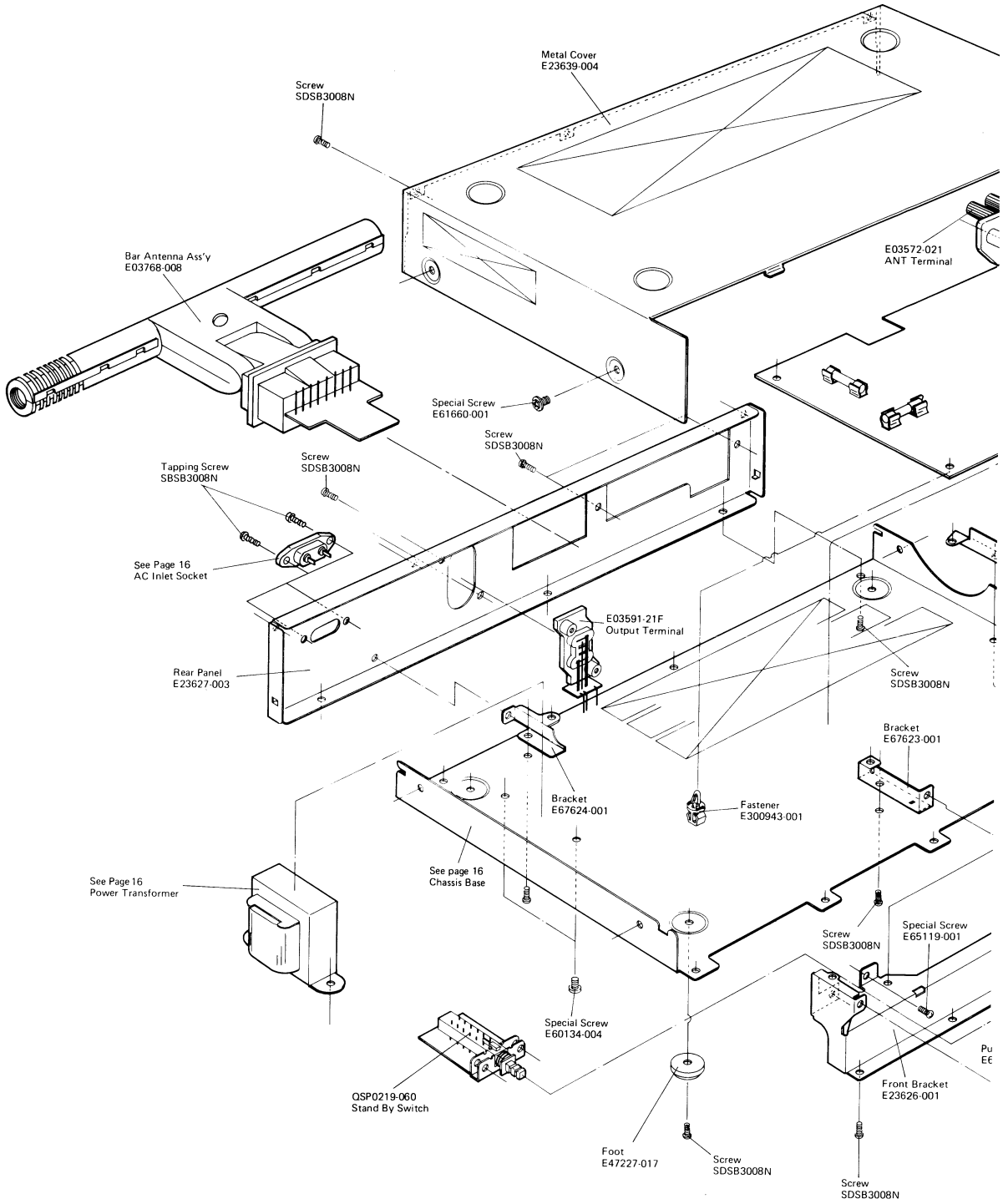
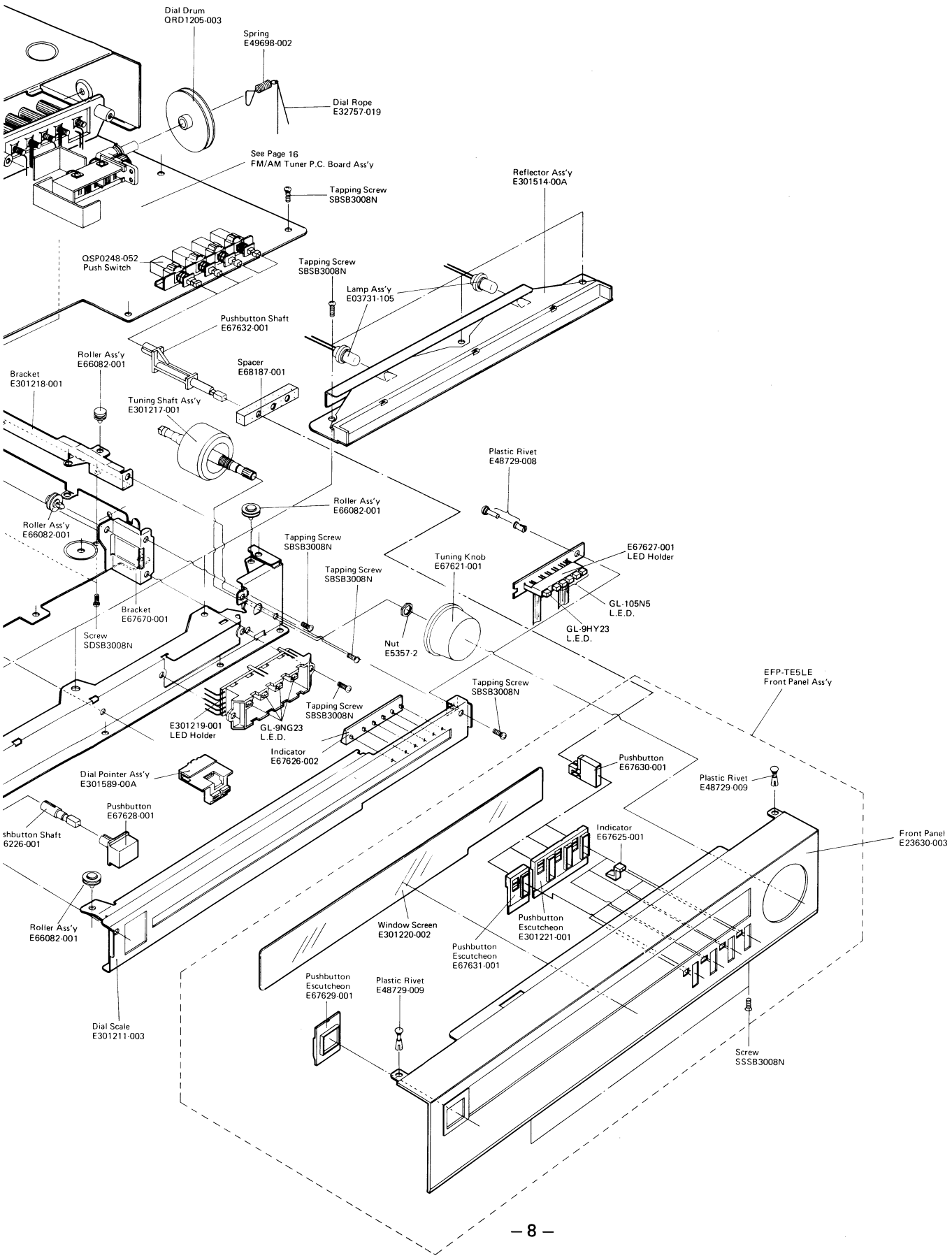
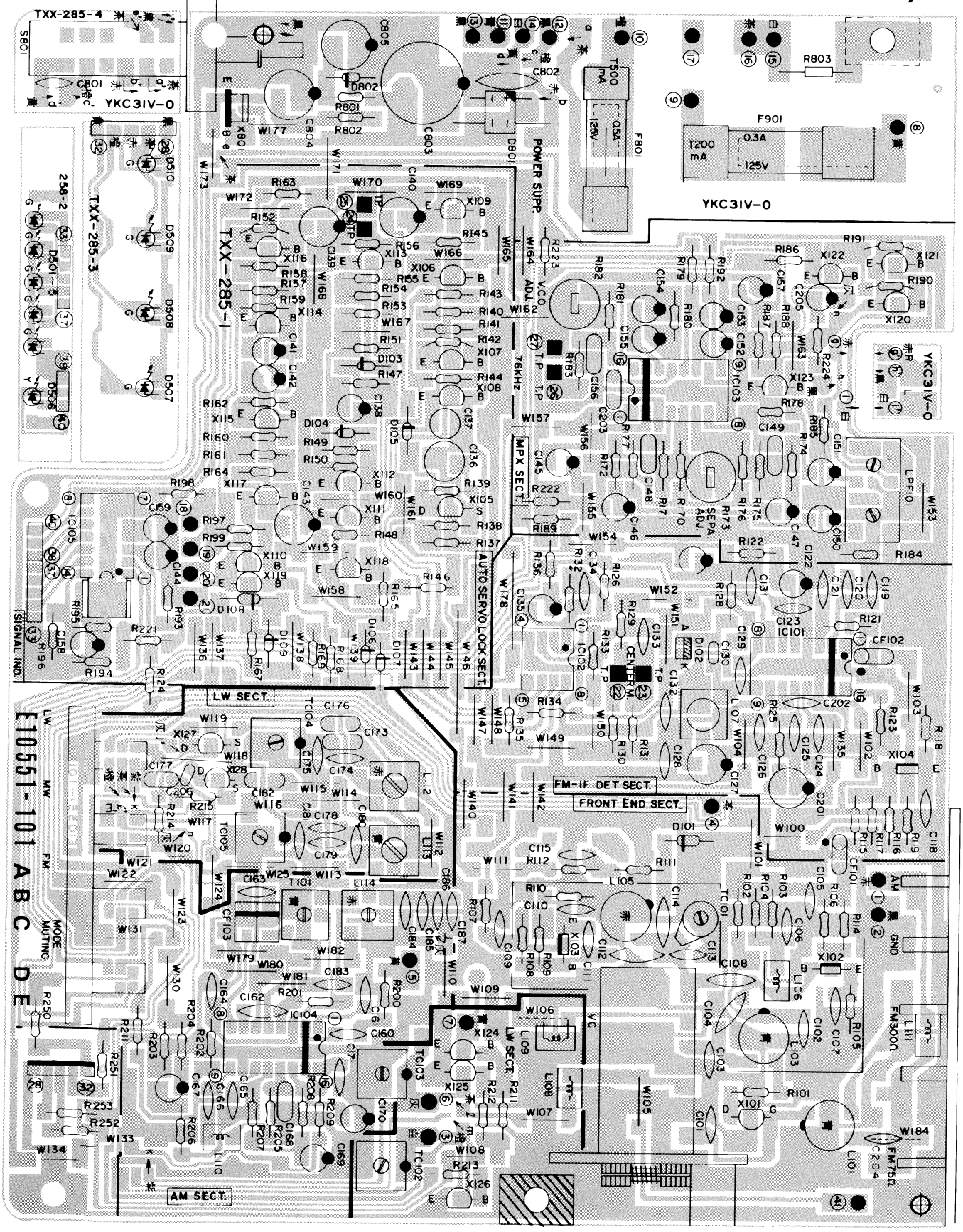


Fig. 12


Dial Drum
QRD1205-003
Spring
E49698-002
Dial Rope
E32757-019
See Page 16
FM/AM Tuner P.C. Board Ass'y
Tapping Screw
SBSB3008N
Reflector Ass'y
E301514-00A
QSP0248-052
Push Switch
Tapping Screw
SBSB3008N
Lamp Ass'y
E03731-105
Pushbutton Shaft
E67632-001
Roller Ass'y
E66082-001
Spacer
E68187-001
Bracket
E301218-001
Tuning Shaft Ass'y
E301217-001
Plastic Rivet
E48729-008
Roller Ass'y
E66082-001
Roller Ass'y
E66082-001
Tapping Screw
SBSB3008N
Tapping Screw
SBSB3008N
Tuning Knob
E67621-001
E67627-001
LED Holder
GL-105N5
L.E.D.
GL-9HY23
L.E.D.
Bracket
E67670-001
Screw
SDSB3008N
Nut
E5357-2
EFP-TE5LE
Front Panel Ass'y
Tapping Screw
SBSB3008N
Tapping Screw
SBSB3008N
E301219-001
LED Holder
GL-9NG23
L.E.D.
Indicator
E67626-002
Pushbutton
E67630-001
Dial Pointer Ass'y
E301589-00A
Plastic Rivet
E48729-009
Pushbutton
E67628-001
shbutton Shaft
6226-001
Indicator
E67625-001
Front Panel
E23630-003
Roller Ass'y
E66082-001
Window Screen
E301220-002
Pushbutton
Escutcheon
E301221-001
Pushbutton
Escutcheon
E67631-001
Pushbutton
Escutcheon
E67629-001
Plastic Rivet
E48729-009
Dial Scale
E301211-003
Screw
SSSB3008N

8. Printed Circuit Board Ass'y and Parts List

8-(1) TXX-285 FM/MW/LW Tuner and Power Supply P.C.Board Ass'y



Each Individual P.C. Board Location

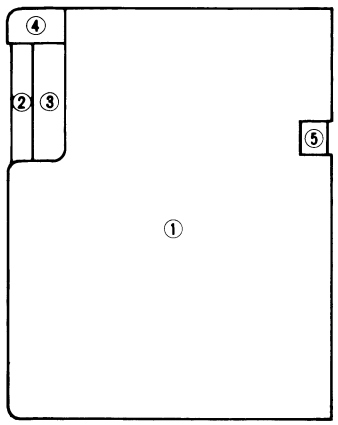


Fig. 14

1 TXX-285-1	FM/MW/LW Tuner P.C. Board Ass'y
2 TXX-285-2	Signal Indicator P.C. Board Ass'y
3 TXX-285-3	LED Indicator P.C. Board Ass'y
4 TXX-285-4	Stand-by Switch P.C. Board Ass'y
5 TXX-285-5	Output Terminal P.C. Board Ass'y

Note: The specific symbols (赤 , 黒 , 白 . . . etc.) on a surface of P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly of P.C. Board at the factory.

Transistors

Item No.	Part Number	Rating		Description	
		Pc	fT		Maker
X101	2SK168(E,F)	0.2 W		F.E.T.	Hitachi
X102	2SC535(C)	0.1 W	940 MHz	Silicon	"
X103	2SC461(C)	0.2 W	230 MHz	"	"
X104	2SC461(C)	"	"	"	"
X105	2SK105(E,F)	0.25 W	"	F.E.T.	NEC
X106	2SA1029(C,D)	0.2 W	200 MHz	Silicon	Hitachi
X107	2SC458(D)	"	230 MHz	"	"
X108	2SA1029(C,D)	"	200 MHz	"	"
X109	2SC458(D)	"	230 MHz	"	"
X110	2SC458(D)	"	"	"	"
X111	2SC458(D)	"	"	"	"
X112	2SC458(D)	"	"	"	"
X113	2SC458(D)	"	"	"	"
X114	2SC458(D)	"	"	"	"
X115	2SC458(D)	"	"	"	"
X116	2SC458(D)	"	"	"	"
X117	2SC458(D)	"	"	"	"
X118	2SC458(D)	"	"	"	"
X119	2SC458(D)	"	"	"	"
X120	2SC458(D)	"	"	"	"
X121	2SC458(D)	"	"	"	"
X122	2SA1029(C,D)	"	200 MHz	"	"
X123	2SC458(D)	"	230 MHz	"	"
X124	2SC458(D)	"	"	"	
X125	2SC458(D)	"	"	"	
X126	2SC535(C)	0.1 W	940 MHz	"	"
X127	2SK105(E,F)	0.25 W		F.E.T.	NEC
X128	2SK105(E,F)	"		"	"
X801	2SD330V(D,E)	1.75 W	8 MHz	Silicon	Sanyo

Integrated Circuits

Item No.	Part Number	Rating	Description	
		Pc		Maker
IC101	HA12412		I.C.	Hitachi
IC102	AN6552		I.C.	Matsushita
IC103	HA12016		I.C.	Hitachi
IC104	HA1197	0.45 W	I.C.	"
IC105	LB1416S		I.C.	Sanyo

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D101	1S2687		V. Cap. Diode	Hitachi
D102	KV1226		V. Cap. Diode	Toko
D103	1S2076-31		Silicon	Hitachi
D104	1S2076-31		"	"
D105	1S2076-31		"	"
D106	1S2076-31		"	"
D107	1S2076-31		"	"
D108	1S188FM		Germa-nium	Sanyo
D109	1S2076-31		Silicon	Hitachi
D501~5	GL-105N5		L.E.D.	Sharp
D506	GL-9HY23		"	"
D507	GL-9NG923		"	"
D508	GL-9NG923		"	"
D509	GL-9NG923		"	"
D510	GL-9NG923		"	"
D801	ESAB03-02A		Silicon	Fuji ⚠
D802	RD13EB3		Silicon (Zener)	NEC

Coils & Transformers

Item No.	Part Number	Rating	Description
L101	E03477-24		FM Antenna Coil (Blue)
L103	E03477-53		FM RF Coil (Blue)
L105	E03477-055		FM OSC Coil (Red)
L106	E03522-2R2KY		Choke Coil
L107	E03078-51		Detector Coil
L108	E03522-2R2KY		Choke Coil
L109	E03522-2R2KY		"
L110	E03522-102KY		"
L111	E03522-2R2KY		"
L112	E03079-39		MW OSC Coil
L113	E03079-38		LW OSC Coil
T101	E03613-017		AM IFT

Filters

Item No.	Part Number	Rating	Description
CF101	E03357-013		FM Ceramic Filter
CF102	E03357-013		"
CF103	E03613-019		AM Ceramic Filter
LP101	E03427-023		Low Pass Filter
TC101	QAT3001-014		Trimmer Capacitor
TC102	QAT2001-001		"
TC103	QAT2001-001		"
TC104	QAT2001-005		"
TC105	QAT2001-005		"

Capacitors

Item No.	Part Number	Rating		Description
C101	QCS21HJ-8R0	8 pF	50 V	Ceramic
C102	QCF21HP-103	0.01 μF	"	"
C103	QCS21HJ-180	18 pF	"	"
C104	QCS11HJ-5R0	5 pF	"	"
C105	QCF21HP-103	0.01 μF	"	"
C106	QCS21HJ-101	100 pF	"	"
C107	QCF21HP-103	0.01 μF	"	"
C108	QCT05CH-2R0	2 pF	"	"
C109	QCF21HP-103	0.01 μF	50 V	"
C110	QCT26CH-100	10 pF	"	"
C111	QCT26CH-220	22 pF	"	"
C112	QCT05TH-7R0	7 pF	"	"
C113	QCT26PH-180	18 pF	"	"
C114	QCT05CH-5R0	5 pF	"	"
C115	QCF21HP-223	0.022 μF	50 V	
C118	QCF21HP-223	"	"	Ceramic
C119	QCF21HP-473	0.047 μF	"	
C120	QCF21HP-473	"	"	
C122	QET51ER-106	10 μF	25 V	Electrolytic
C123	QCS21HJ-101	100 pF	50 V	Ceramic
C124	QCF21HP-223	0.022 μF	"	"
C127	QET51ER-106	10 μF	25 V	Electrolytic
C128	QCC21EM-473	0.047 μF	"	
C129	QCT26CH-100	10 pF	50 V	Ceramic
C130	QFM81HK-223	0.022 μF	"	Mylar
C131	QCS21HJ-101	100 pF	"	Ceramic
C132	QCT26UJ-471A	470 pF	"	"
C133	QCF21HP-223	0.022 μF	"	"
C134	QCS21HJ-221	220 pF	"	"
C135	QET51ER-106	10 μF	25 V	Electrolytic
C136	QEZ0046-475	4.7 μF	50 V	N.P. Electrolytic
C137	QEZ0046-105	1 μF	"	Electrolytic
C138	QET51CR-226	22 μF	16 V	"
C140	QET50JR-227	220 μF	6.3 V	"
C141	QET51HR-475	4.7 μF	50 V	"
C142	QET51HR-475	"	"	"
C144	QET51ER-106	10 μF	25 V	"
C145	QET51HR-475	4.7 μF	50 V	"
C146	QET51CR-226	22 μF	16 V	"
C147	QET51CR-226	"	"	"
C148	QCY21HK-102	1000 pF	50 V	Ceramic
C149	QCY21HK-102	1000 pF	"	"
C150	QET51HR-105	1 μF	"	Electrolytic
C151	QET51HR-105	"	"	"
C152	QET51HR-475	4.7 μF	"	"
C153	QET51HR-474	0.47 μF	"	"
C154	QET51HR-475	4.7 μF	"	"
C155	QEB51EM-474	0.47 μF	25 V	Low Leak Current Electrolytic
C156	QFP31HJ-102	1000 pF	50 V	Polypropyrene
C157	QET51ER-106	10 μF	25 V	Electrolytic
C158	QET51HR-475	4.7 μF	50 V	"
C159	QET51ER-106	10 μF	25 V	"
C160	QCF21HP-223	0.022 μF	50 V	Ceramic
C161	QCF21HP-223	"	"	"
C162	QCF21HP-223	"	"	"
C163	QCS21HJ-470	47 pF	"	"
C164	QET51HR-105	1 μF	"	Electrolytic
C165	QCF21HP-223	0.022 μF	"	Ceramic
C166	QCS21HJ-121	120 pF	"	"
C167	QET51HR-474	0.47 μF	"	Electrolytic
C168	QCY21HK-102Z	1000 pF	"	Ceramic
C169	QET51ER-106	10 μF	25 V	Electrolytic
C170	QET51HR-105	1 μF	50 V	"

Capacitors

Item No.	Part Number	Rating		Description
C171	QCF21HP-223	0.022 μF	50 V	Ceramic
C173	QFP31HJ-331	330 pF	"	Polypropyrene
C174	QCS21HJ-470	47 pF	"	Ceramic
C175	QCT26UJ-100	10 pF	"	"
C176	QFM81HK-103	0.01 μF	50 V	Mylar
C177	QFM81HK-103	"	"	"
C178	QCT26CH-680	68 pF	"	Ceramic
C179	QCT26CH-680	"	"	"
C180	QCT26CH-220	22 pF	"	"
C181	QCT26UJ-270	27 pF	"	"
C182	QFM81HK-103	0.01 μF	50 V	Mylar
C201	QET51HR-105	1 μF	50 V	Electrolytic
C202	QCF21HP-473	0.047 μF	"	
C203	QFM21HK-473		"	Mylar
C204	QCS21HZ-101	100 pF	50 V	Ceramic
C205	QET51HR-105	1 μF	"	Electrolytic
C206	QFM81HK-103	0.01 μF	"	Mylar
C801	QCF21HP-103A	0.01 μF	"	Ceramic
C802	QCE22HP-103A	"	500 V	"
C803	QET51ER-108H	1000 μF	25 V	Electrolytic
C804	QET51CR-227H	220 μF	16 V	"

Resistors

Item No.	Part Number	Rating		Description
R102	QRD141J-221S	220 Ω	1/4 W	Carbon
R103	QRD141J-183S	18 kΩ	"	"
R104	QRD141J-392S	3.9 kΩ	"	"
R105	QRD141J-102S	1 kΩ	"	"
R106	QRD141J-331S	330 Ω	"	"
R107	QRD141J-561S	560 Ω	"	"
R108	QRD141J-223S	22 kΩ	"	"
R109	QRD141J-103S	10 kΩ	"	"
R110	QRD141J-272S	2.7 kΩ	"	"
R111	QRD141J-184S	180 kΩ	"	"
R112	QRD141J-274S	270 kΩ	"	"
R114	QRD141J-101S	100 Ω	"	"
R115	QRD141J-101S	"	"	"
R116	QRD141J-273S	27 kΩ	"	"
R117	QRD141J-103S	10 kΩ	"	"
R118	QRD141J-102S	1 kΩ	"	"
R119	QRD141J-331S	330 Ω	"	"
R120	QRD141J-562S	5.6 kΩ	"	"
R121	QRD141J-331S	330 Ω	"	"
R122	QRD141J-123S	12 kΩ	"	"
R123	QRD141J-393S	39 kΩ	"	"
R124	QRD141J-472S	4.7 kΩ	"	"
R126	QRD141J-562S	5.6 kΩ	"	"
R127	QRD141J-103S	10 kΩ	"	"
R128	QRD141J-334S	330 kΩ	"	"
R129	QRD141J-332S	3.3 kΩ	"	"
R130	QRD141J-102S	1 kΩ	"	"
R131	QRD141J-102S	"	"	"
R132	QRD141J-183S	18 kΩ	"	"
R134	QRD141J-682S	6.8 kΩ	"	"
R136	QRD141J-333S	33 kΩ	"	"
R137	QRD141J-104S	100 kΩ	"	"
R138	QRD141J-684S	680 kΩ	"	"
R139	QRD141J-271S	270 Ω	"	"
R140	QRD141J-104S	100 kΩ	"	"

Resistors

Item No.	Part Number	Rating		Description
R141	QRD141J-274S	270 kΩ	1/4 W	Carbon
R142	QRD141J-104S	100 kΩ	"	"
R143	QRD141J-273S	27 kΩ	"	"
R144	QRD141J-273S	"	"	"
R145	QRD141J-333S	33 kΩ	"	"
R146	QRD141J-333S	"	"	"
R147	QRD141J-183S	18 kΩ	"	"
R148	QRD141J-104S	100 kΩ	"	"
R149	QRD141J-333S	33 kΩ	"	"
R150	QRD141J-333S	"	"	"
R151	QRD141J-183S	18 kΩ	"	"
R152	QRD141J-392S	3.9 kΩ	"	"
R153	QRD141J-273S	27 kΩ	"	"
R154	QRD141J-271S	270 Ω	"	"
R155	QRD141J-103S	10 kΩ	"	"
R156	QRD141J-153S	15 kΩ	"	"
R157	QRD141J-182S	1.8 kΩ	"	"
R158	QRD141J-560S	56 Ω	"	"
R159	QRD141J-473S	47 kΩ	"	"
R160	QRD141J-473S	"	"	"
R161	QRD141J-182S	1.8 kΩ	"	"
R162	QRD141J-560S	56 Ω	"	"
R163	QRD141J-681S	680 Ω	"	"
R164	QRD141J-103S	10 kΩ	"	"
R165	QRD141J-223S	22 kΩ	"	"
R167	QRD141J-472S	4.7 kΩ	"	"
R168	QRD141J-104S	100 kΩ	"	"
R169	QRD141J-104S	"	"	"
R170	QRD141J-183S	18 kΩ	"	"
R171	QRD141J-473S	47 kΩ	"	"
R172	QRD141J-272S	2.7 kΩ	"	"
R173	QVP4A0B-104	100 kΩ	"	Variable
R174	QRD141J-272S	2.7 kΩ	"	Carbon
R175	QRD141J-473S	47 kΩ	"	"
R176	QRD141J-183S	18 kΩ	"	"
R177	QRD141J-152S	1.5 kΩ	"	"
R178	QRD141J-152S	"	"	"
R179	QRD141J-103S	10 kΩ	"	"
R180	QRD141J-102S	1 kΩ	"	"
R181	QRD141J-682S	6.8 kΩ	"	"
R182	QVP4A0B-222	2.2 kΩ	"	Variable
R183	QRD141J-224S	220 kΩ	"	Carbon
R184	QRD141J-332S	3.3 kΩ	"	"
R185	QRD141J-332S	"	"	"
R186	QRD141J-273S	27 kΩ	"	"
R187	QRD141J-473S	47 kΩ	"	"
R188	QRD141J-103S	10 kΩ	"	"
R189	QRD141J-473S	47 kΩ	"	"
R190	QRD141J-472S	4.7 kΩ	"	"
R191	QRD141J-472S	"	"	"
R192	QRD141J-102S	1 kΩ	"	"
R193	QRD141J-682S	6.8 kΩ	"	"
R194	QRD141J-104S	100 kΩ	"	"
R195	QRD141J-563S	56 kΩ	"	"
R196	QRD141J-183S	18 kΩ	"	"
R197	QRD141J-391S	390 Ω	"	"
R198	QRD141J-561S	560 Ω	"	"
R199	QRD141J-391S	390 Ω	"	"
R200	QRD141J-221S	220 Ω	"	"
R201	QRD141J-152S	1.5 kΩ	"	"
R202	QRD141J-151S	150 Ω	"	"
R203	QRD141J-223S	22 kΩ	"	"
R204	QRD141J-103S	10 kΩ	"	"
R205	QRD141J-331S	330 Ω	"	"
R206	QRD141J-332S	3.3 kΩ	"	"

Resistors

Item No.	Part Number	Rating		Description
R207	QRD141J-103S	10 kΩ	1/4 W	Carbon
R208	QRD141J-103S	"	"	"
R209	QRD141J-102S	1 kΩ	"	"
R210	QRD129J-681	680 Ω	1/2 W	Carbon (UNF.)
R211	QRD141J-221S	220 Ω	1/4 W	Carbon
R212	QRD141J-104S	100 kΩ	"	"
R213	QRD141J-104S	"	"	"
R214	QRD141J-104S	"	"	"
R215	QRD141J-104S	"	"	"
R216	QRD141J-681S	680 Ω	"	"
R221	QRD141J-392S	3.9 kΩ	"	"
R222	QRD141J-393S	39 kΩ	"	"
R223	QRD141J-102S	1 kΩ	"	"
R224	QRD141J-104S	100 kΩ	"	"
R225	QRD141J-104S	"	"	"
R250	QRD141J-681S	680 Ω	"	"
R251	QRD141J-681S	"	"	"
R252	QRD141J-681S	"	"	"
R253	QRD141J-681S	"	"	"
R801	QRD141J-102S	1 kΩ	"	"
R802	QRD141J-101S	100 Ω	"	"

Others

Item No.	Part Number	Rating	Description
	EWR33A-20NN	Flat Wire Ass'y	
	EWR35A-20NN	"	
	EWS015-038	SKT Wire Ass'y	
	E03572-021	ANT Terminal	
	E03591-21F	2P Pin Jack	
	E301219-001	LED Holder	Function Indicator
	E33754-001	Tie Band	
	E43727-002	Tab	
	E48965-002	Fuse Clip	F801, F901 ⚠
	E65396-001	Earth Plate	
	E67627-001	LED Holder	Signal Indicator
	E67642-001	Shield Plate	
	E67643-001	"	
	QAA2232-003	V. Capacitor	
	QMV5005-005	5P Plug Ass'y	
	QSP0248-052	Push Switch	
S801	QSP0219-060	Push Switch	Stand By Switch ⚠

9. Packing Materials and Part Numbers

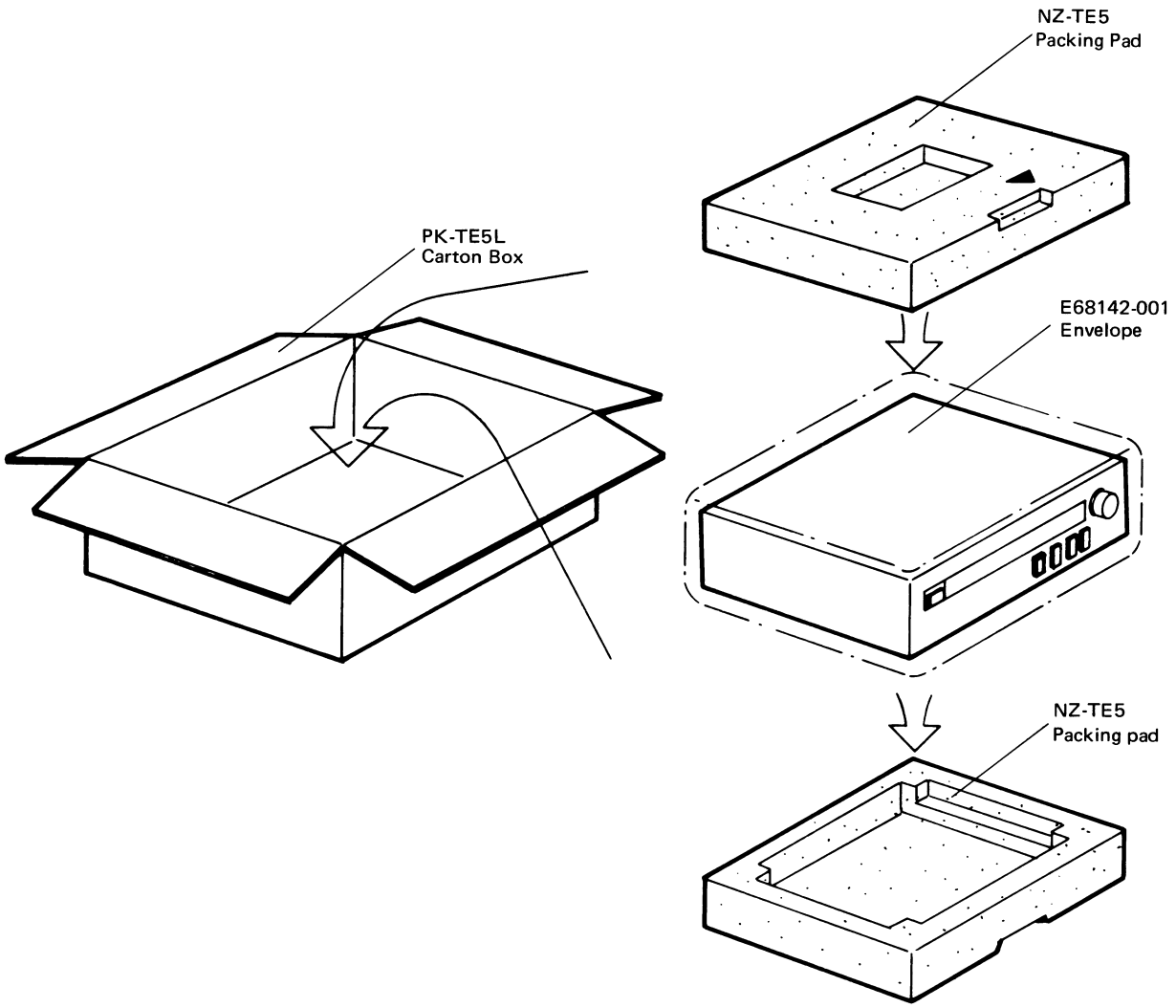
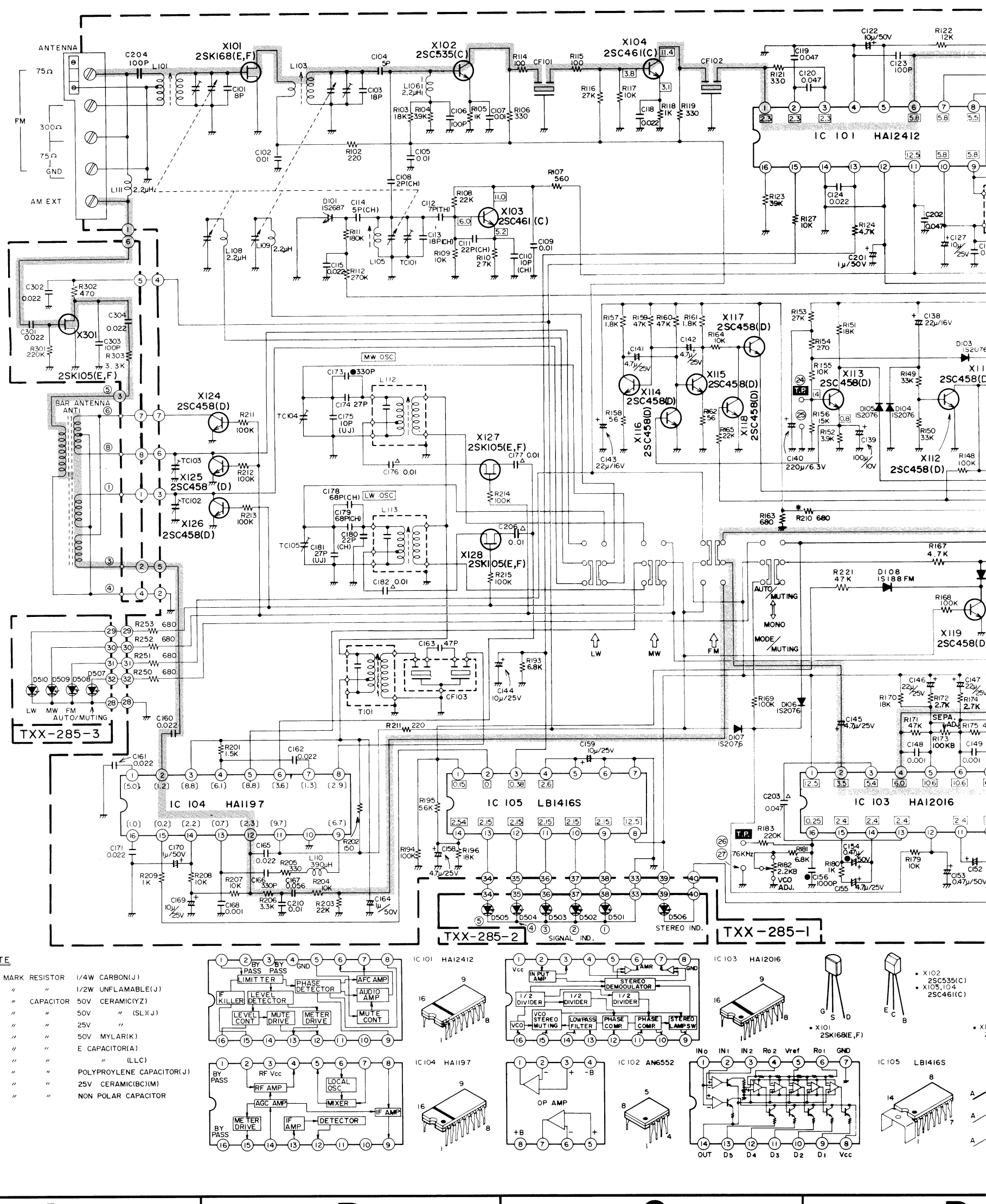


Fig. 15

10. T-E5L Schematic Diagram



NOTE

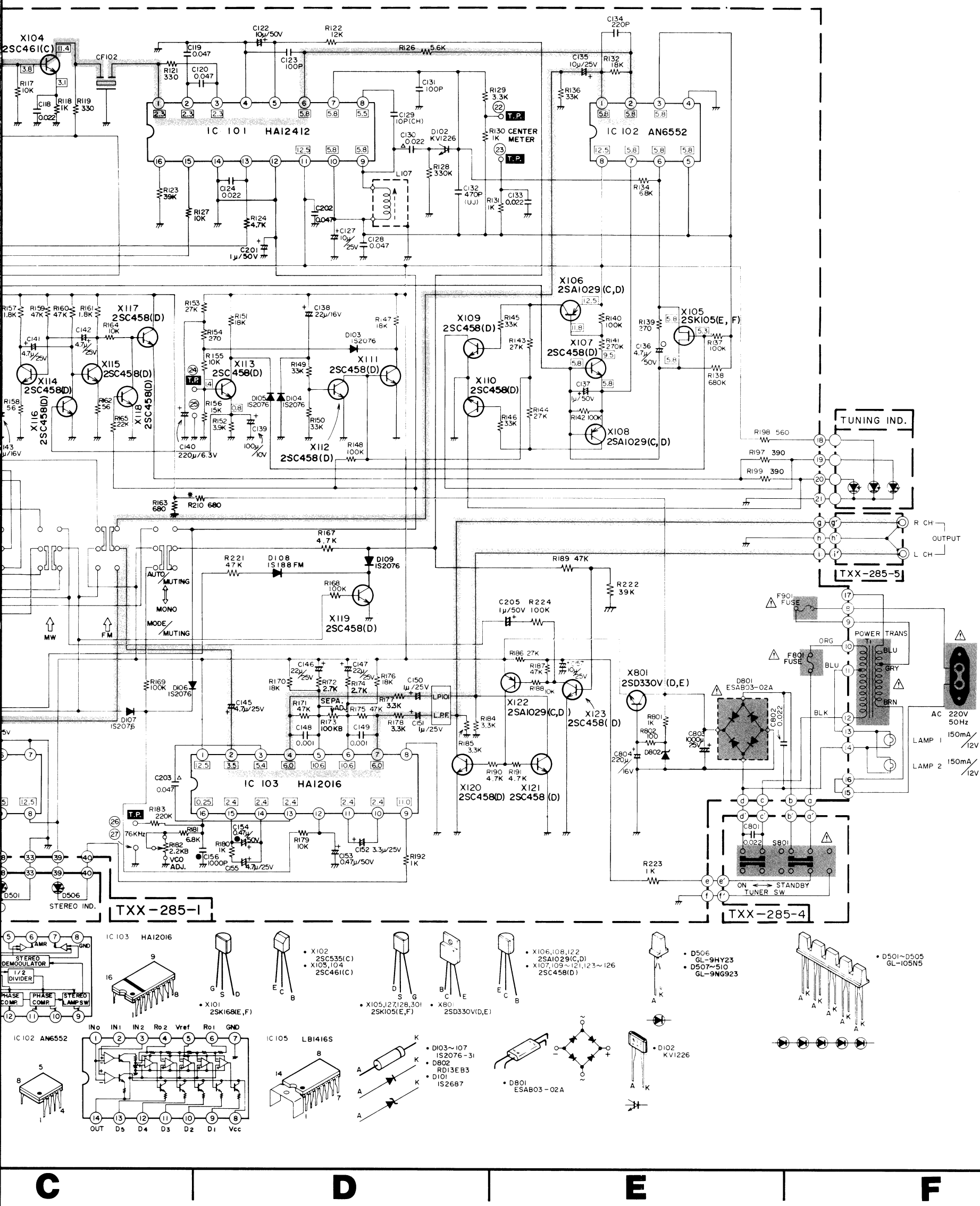
NON MARK	RESISTOR	1/4W	CARBON(J)
✳	〃	〃	1/2W	UNFLAMABLE(J)
NON	〃	CAPACITOR	50V	CERAMIC(YZ)
□	〃	〃	50V	〃 (SL)(J)
■	〃	〃	25V	〃
△	〃	〃	50V	MYLAR(K)
⫫	〃	〃		E CAPACITOR(A)
❀	〃	〃		〃 (LLC)
●	〃	〃		POLYPROYLENE CAPACITOR(J)
G	〃	〃	25V	CERAMIC(BC)(M)
○	〃	〃		NON POLAR CAPACITOR

Printed Circuit Board Ass'y Locations

P.C. Board Ass'y	Description	Page
TXX-285	FM/MW/LW Tuner and Power Supply P.C. Board Ass'y	9

Notes:

1. Voltage values in ▭ are positive.
2. —— indicates positive B power supply.
3. ▒▒ indicates signal path.
4. When replacing the parts in the darkened area (▒▒) and those marked with △, be sure to use the designated parts to ensure safety.
5. Parts in red indicate transistors or ICs.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

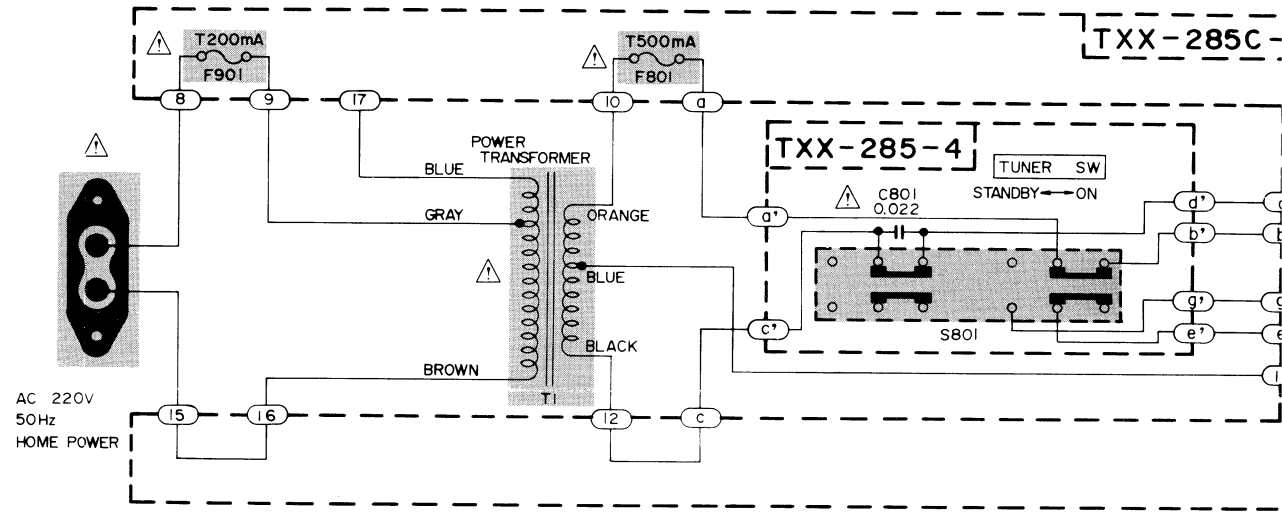


es in ▭ are positive.
es positive B power supply.
es signal path.
ing the parts in the darkened area (▒) and
d with ⚠ , be sure to use the designated parts
fety.
ndicate transistors or ICs.
andard circuit diagram.
and contents are subject to change without

The schematic diagram shown sheet is for EUROPE
The primary circuit and deemphasis circut are different from the diagram for other areas , therefore pleas

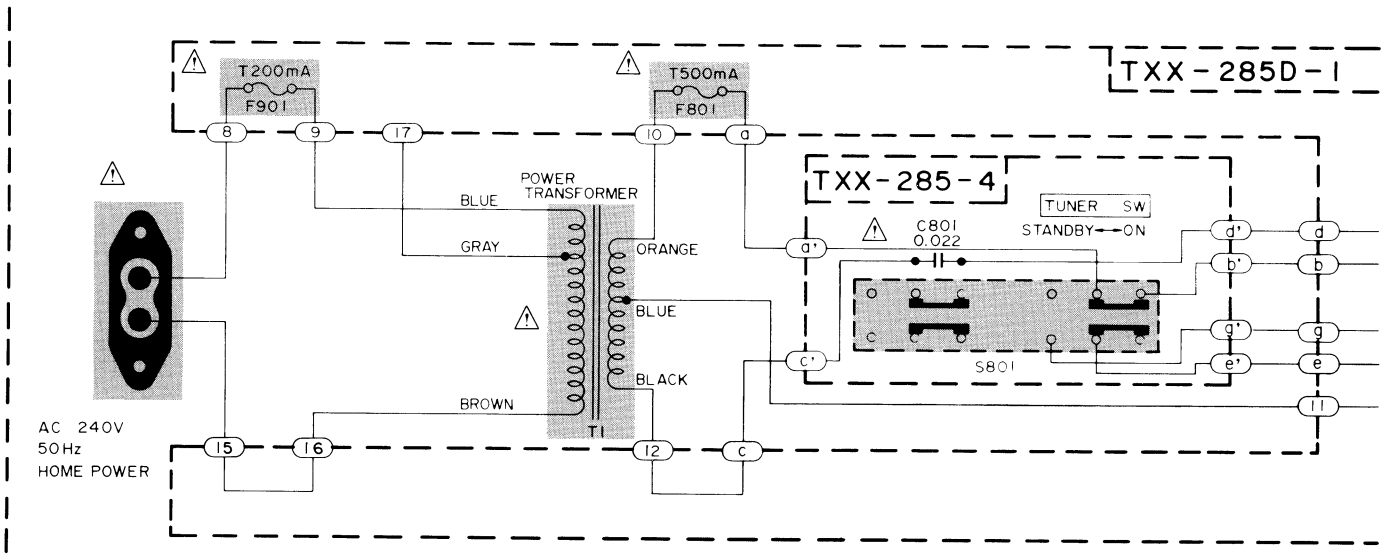
T-E5L(E) FOR EUROPE

PRIMARY CIRCUIT : AC 220V~50Hz
DEEMPHASIS : 50μSEC (USE TXX-285C)



T-E5L(BS) FOR UNITED KINGDAM

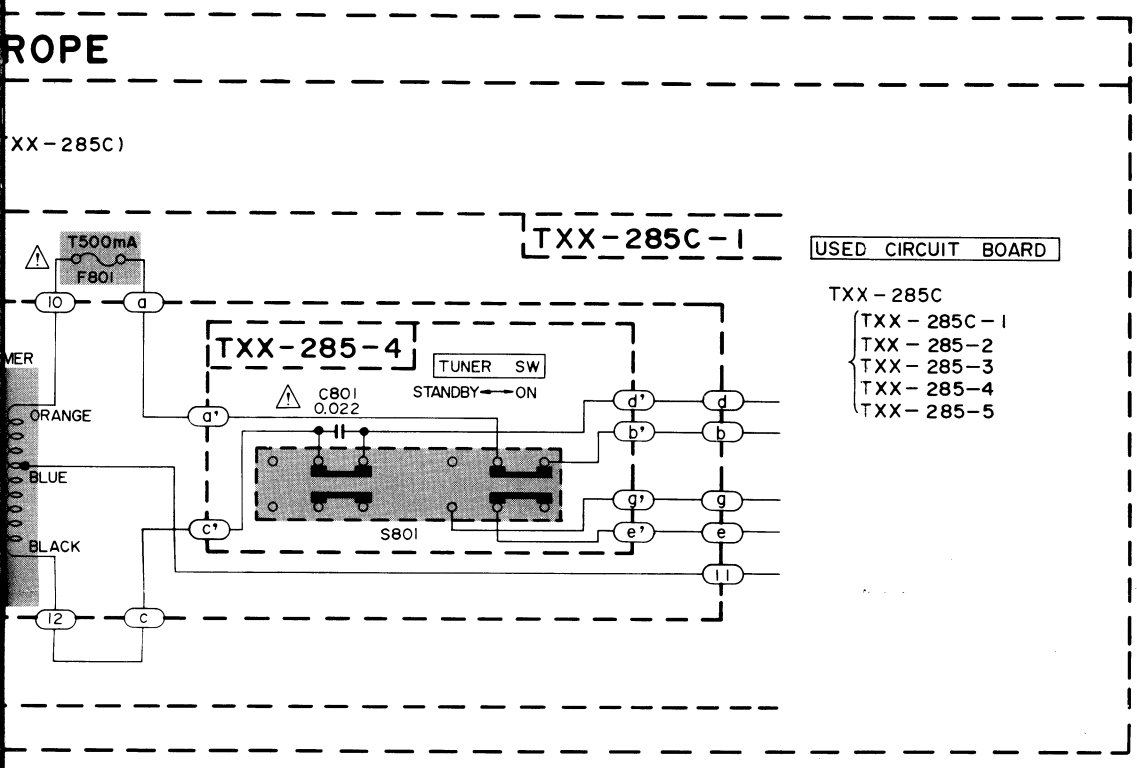
PRIMARY CIRCUIT : AC 240V~50Hz
DEEMPHASIS : 50μSEC (USE TXX-285DBS)

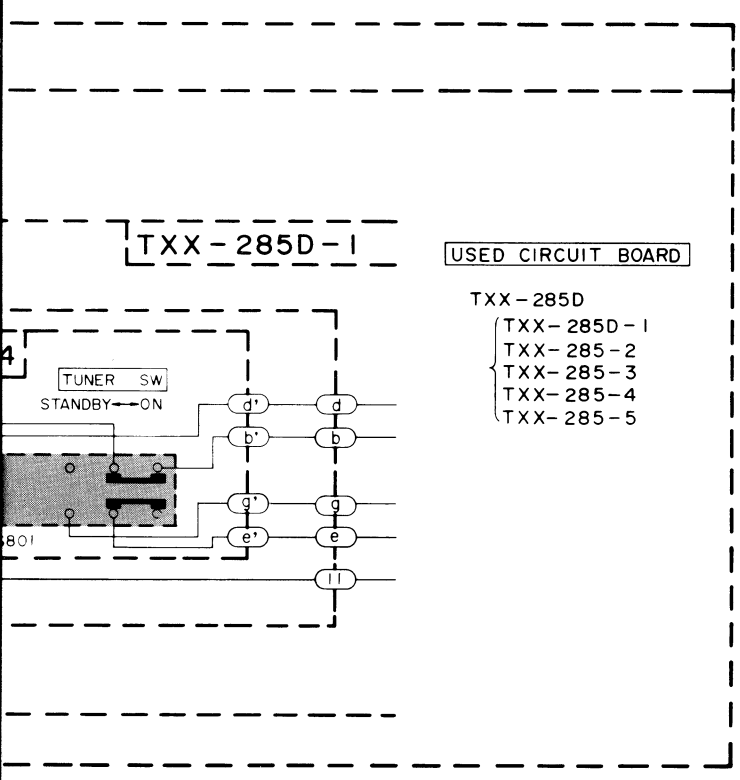


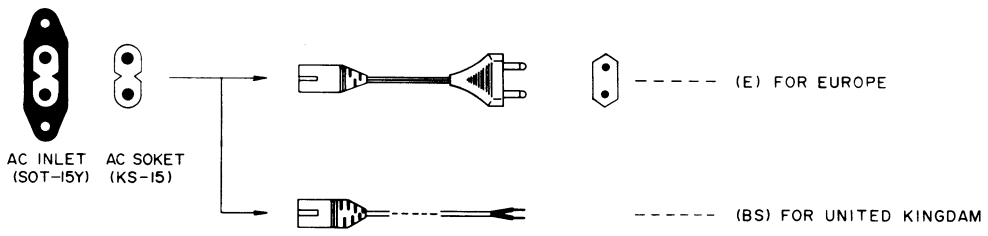
USED CIRCUIT BOARD

TXX-285D
- TXX-285D-1
- TXX-285-2
- TXX-285-3
- TXX-285-4
- TXX-285-5

DPE
ifferent from the diagram for other areas, therefore please use the proper schematic diagram shown below.







11. Accessories List

Item No.	Part Number	Description	Q'ty
1	See below	Instruction Book	1
2	E03479-003	Signal Cord	1
3	E03614-002	FM Antenna	1
4	E41202-2	Envelope (Instruction Book and Others)	1
5	QPGA015-03005	Envelope (Power Cord, Signal Cord, FM Antenna etc.)	1
6	See below	Power Cord	1
7	See below	Warning Label	1
8	See below	Warranty Card	1

12. Parts List with Specified Numbers for Designated Areas

Page	Item No.	Description	Continental Europe	United Kingdom
3	T1	Power Transformer ⚠	E03042-36E	E03042-36EBS
4		AC Inlet Socket ⚠	QMC0239-002	QMC0239-002BS
	F901	Fuse (Primary) ⚠	QMF51A2-R20L (T200 mA)	QMF51A2-R20LBS (T200 mA)
	F801	Fuse (Secondary) ⚠	QMF51A2-R50L (T500 mA)	QMF51A2-R50LBS (T500 mA)
3	3-(1)	FM/MW/LW Tuner P.C. Board Ass'y ⚠	TXX-285C	TXX-285DBS
3	3-(1)	TXX-285 P.C. Board ⚠ (without Parts)	E10551-101	E10551-101BS
16		Instruction Book	E30580-867A	E30580-867ABS
16		Power Cord ⚠	QMP3950-183	QMP9017-009BS
16		Warning Label	–	E60965-001BS
16		Warranty Card	–	BT20013C

NOTE: ⚠ SAFETY PARTS